Chemical/Biological Terrorism
June, 2003

1: Acad Emerg Med. 2003 Mar;10(3):290.
A role for ipratropium in chemical terrorism preparedness.
Perrone J, Henretig F, Sims M, Beers M, Grippi MA.
Publication Types: Letter
PMID: 12615600 [PubMed - indexed for MEDLINE]

2: Am Fam Physician. 2003 May 1;67(9):1877-8.
Comment on:
Am Fam Physician. 2003 May 1;67(9):1927-34.
Importance of bioterrorism preparedness for family physicians.
Rippen HE, Gursky E, Stoto MA.
Publication Types: Comment Editorial
PMID: 12751652 [PubMed - indexed for MEDLINE]

3: Am Fam Physician. 2003 May 1;67(9):1927-34.
Comment in:
Am Fam Physician. 2003 May 1;67(9):1877-8.
Recognition and management of bioterrorism infections.
O'Brien KK, Higdon ML, Halverson JJ.
Family Practice Residency Program, Martin Army Community Hospital, Fort Benning, Georgia, USA.
Recent events have demonstrated that bioterrorists have the ability to disseminate biologic agents in the United States and cause widespread social panic. Family physicians would play a key role in the initial recognition of a potential bioterrorism attack. Familiarity with the infectious agents of highest priority can expedite diagnosis and initial management, and lead to a successful public health response to such an attack. High-priority infectious agents include anthrax, smallpox, plague, tularemia, botulism, and viral hemorrhagic fever. Anthrax and smallpox must be distinguished from such common infections as influenza and varicella. Anthrax treatment is stratified into postexposure prophylaxis and treatment of confirmed cutaneous, intestinal, or inhalation
anthrax. Disease prevention by vaccination and isolation of affected persons is key in preventing widespread smallpox infection. Many resources are available to physicians when a bioterrorism attack is suspected, including local public health agencies and the Centers for Disease Control and Prevention.

Publication Types: Review Review, Tutorial
PMID: 12751654 [PubMed - indexed for MEDLINE]

4: Am J Bioeth. 2002 Autumn;2(4):W1.
Response to commentaries : Resnik, D. B. and K. A. DeVille. 2002. "Bioterrorism and patient rights: 'compulsory licensure' and the case of Cipro." The American Journal of Bioethics 2(3): 29-39.
Resnik DB, DeVille KA.
East Carolina University, USA
Publication Types: Letter
PMID: 12816075 [PubMed - indexed for MEDLINE]

5: Anesth Analg. 2003 Jun;96(6):1739-42, table of contents.
The use of advanced simulation in the training of anesthesiologists to treat chemical warfare casualties.
Berkenstadt H, Ziv A, Barsuk D, Levine I, Cohen A, Vardi A.
Department of Anesthesiology and Intensive Care, The Chaim Sheba Medical Center, Tel Hashomer, Israel. berken@netvision.net.il
Training anesthesiologists to treat nerve gas intoxication in a mass casualty scenario is a complicated task. The scenario is an unfamiliar medical situation involving the need to decontaminate patients before providing definitive medical treatment, and the need for physical protection to the medical team before decontamination. We describe the development of a simulation-based training program. In one site of a virtual hospital, anesthesiologists were trained in initial airway and breathing resuscitation before decontamination while wearing full protective gear. In another site, they were trained in the treatment of critically-ill patients with combined conventional and chemical injuries or
severe intoxication. Intubation simulators of newborn, pediatric, and adult patients, advanced full-scale simulators, and actors simulating patients were used. Initial airway, breathing, and antidotal treatment were performed successfully, with or without full protective gear. The gas mask did not interfere with orotracheal intubation, but limited effective communication within the medical team. Chemical protective gloves were the limiting factor in the performance of medical tasks such as fixing the orotracheal tube. Twenty-two participants (88%) pointed out that the simulated cases represented realistic
problems in this scenario, and all 25 participants found the simulated-based training superior to previous traditional training they had in this field. Using advanced simulation, we were able to train anesthesiologists to treat nerve gas intoxication casualties and to learn about the limitations of providing medical care in this setting. IMPLICATIONS: Advanced medical simulation can be used to train anesthesiologists to treat nonconventional warfare casualties. The limitations of medical performance in full protective gear can be learned from this training.
PMID: 12761005 [PubMed - indexed for MEDLINE]

6: Anesthesiology. 2003 Jun;98(6):1517; author reply 1517-8.
Comment on:
Anesthesiology. 2002 Oct;97(4):989-1004.
Neuroprotective and antiepileptic activities of ketamine in nerve agent poisoning.
Mion G, Tourtier JP, Petitjeans F, Dorandeu F, Lallement G, Ruttimann M.
Publication Types: Comment Letter

PMID: 12766670 [PubMed - indexed for MEDLINE]

7: Ann Emerg Med. 2003 May;41(5):685-8.
Rapid atropine synthesis for the treatment of massive nerve agent exposure.
Kozak RJ, Siegel S, Kuzma J.
Department of Emergency Medicine, Mission Hospital Regional Medical Center, Mission Viejo, CA, USA. rjkozak@uci.edu
STUDY OBJECTIVE: We developed and tested a protocol for compounding a large volume of injectable atropine from powder. The resulting protocol could be used by hospitals to rapidly use large amounts of stockpiled atropine. METHODS: The protocol required 2 g of solid (powdered) atropine and 1 L of normal saline solution. The solution was filtered and mixed. One hundred syringes were filled by using a standard syringe-batching system. Modifications, including hand filling, were studied to reduce the time required to synthesize one hundred 3-mL syringes. RESULTS: A single pharmacist was able to reconstitute one hundred 6-mg atropine syringes in 29 minutes using the batching system. The quickest method for a single pharmacist filling syringes by hand was 34 minutes. The cost to the hospital for 5 g of powdered atropine was 11 dollars versus 5,000 dollars for prefilled syringes. CONCLUSION: Large quantities of atropine syringes can be compounded from a powdered form in a timely manner. Additionally, there is a significant cost advantage to using powdered atropine as a hospital stockpile.
PMID: 12712036 [PubMed - indexed for MEDLINE]

8: Ann N Y Acad Sci. 2003 Apr;987:207-14.
Novel method to control pathogenic bacteria on human mucous membranes.
Fischetti VA.
The Rockefeller University, 1230 York Avenue, New York, New York 10021, USA. vaf@mail.rockefeller.edu
Nearly all infections begin at a mucous membrane site. Also, the human mucous membranes are a reservoir for many pathogenic bacteria found in the environment (that is, pneumococci, staphylococci, streptococci), some of which are resistant to antibiotics. Clearly, if this human reservoir can be reduced or eliminated, the incidence of disease will be markedly reduced. However, compounds designed to eliminate this reservoir are not available. Towards this goal, we have exploited the highly lethal effects of bacteriophage lytic enzymes (lysins) to specifically destroy disease bacteria on mucous membranes. Such lysins are used by the phage to release their progeny at the end of their replicative cycle. We have identified and purified these enzymes and found that when applied externally to gram-positive bacteria, they are killed seconds after contact. For example, 10(7) S. pyogenes are reduced to undetectable levels 10 s after enzyme
addition. A feature of these enzymes is their high specificity; that is, streptococcal lysins kill streptococci and pneumococcal lysins kill pneumococci without effects on the normal flora organisms. In vivo, an oral colonization model for S. pyogenes and a nasal colonization model for S. pneumoniae were developed to test the capacity of the lysins to kill organisms on these surfaces. In both cases, when the animals were pre-colonized with their respective bacteria then treated with a small amount of lysin, specific for the
colonizing organism, all the animals were found to be free of colonizing bacteria shortly after lysin treatment. Thus, lysins may be added to our armamentarium to control antibiotic-resistant bacteria.
Publication Types: Review Review, Tutorial

PMID: 12727641 [PubMed - indexed for MEDLINE]

9: Aviat Space Environ Med. 2003 Mar;74(3):293-4.
Syndromic surveillance.
Muhm JM, Karras BT.
Publication Types: News
PMID: 12650281 [PubMed - indexed for MEDLINE]

10: Bull World Health Organ. 2003;81(4):308-9. Epub 2003 May 16.
Scientific publishers consider censoring "dangerous" research.
Hagmann M.
Publication Types: News
PMID: 12764501 [PubMed - indexed for MEDLINE]

11: Camb Q Healthc Ethics. 2003 Spring;12(2):192-5.
Human experiments and national security: the need to clarify policy.
Moreno JD.
Center for Biomedical Ethics, University of Virginia, USA.
PMID: 12764885 [PubMed - indexed for MEDLINE]

12: Clin Infect Dis. 2003 Jul 1;37(1):150-1.
Smallpox vaccination to combat bioterrorism.
Arya SC.
Centre for Logistical Research and Innovation, New Delhi 110048, India.
subhashji@hotmail.com
PMID: 12830424 [PubMed - in process]

13: Clin Infect Dis. 2003 Jun 1;36(11):1458-73. Epub 2003 May 22.
Bioterrorism web site resources for infectious disease clinicians and epidemiologists.
Ferguson NE, Steele L, Crawford CY, Huebner NL, Fonseka JC, Bonander JC, Kuehnert MJ.
Office of Health Communications, National Center for Infectious Diseases, Centers for Disease Control and Prevention, Atlanta, GA, 30333, USA.
nferguson@cdc.gov
Finding bioterrorism-related information on the World Wide Web can be laborious. We hope to help readers find such information more easily by summarizing essential information in a consistent framework. A panel of 7 Centers for Disease Control and Prevention reviewers identified Web sites and evaluated them for sponsorship, mission, content usefulness, online ease of use, and adherence to commonly accepted quality criteria. Of >100 potential sites identified, 81 were chosen for target content of interest, and 43 were selected for inclusion. The results were classified into general purpose/portal sites; biological agent information; laboratory, infection control, epidemiology, and mental health information; and emergency contact sources, news and updates, event preparedness resources, information for first-responder settings, clinical and public education materials, and research resources. Agents covered included anthrax, smallpox, plague, botulism, tularemia, and viral hemorrhagic fever.

PMID: 12766842 [PubMed - indexed for MEDLINE]

14: Clin Infect Dis. 2003 May 15;36(10):1275-83. Epub 2003 May 09.
Inhalational anthrax due to bioterrorism: would current Centers for Disease Control and Prevention guidelines have identified the 11 patients with inhalational anthrax from October through November 2001?
Mayer TA, Morrison A, Bersoff-Matcha S, Druckenbrod G, Murphy C, Howell J, Hanfling D, Cates R, Pauze D, Earls J.
Department of Emergency Medicine, Inova Fairfax Hospital, Falls Church, Virginia 22042, USA. thom.mayer@inova.com
A panel of 10 physicians used the nominal group technique to assess the ability of the Centers for Disease Control and Prevention (CDC) interim guidelines for clinical evaluation of persons with possible inhalational anthrax (IA) to retrospectively identify the 11 patients with IA seen during the October 2001 bioterrorism outbreak. The guidelines would not have identified 10 of 11 of these patients, primarily because the guidelines were designed to address only those patients with a known history of exposure or clearly identified environmental or occupational risk. The panel suggested revisions to the guidelines, primarily consisting of broadening the criteria for evaluation to include either known exposure or environmental occupational risk, or to include
clinical symptoms consistent with IA. These extensions of the guidelines retrospectively identified 8 of 11 of the patients with IA from October 2001.
PMID: 12746773 [PubMed - indexed for MEDLINE]

15: Clin Lab Sci. 2002 Winter;15(1):6-8.
Bioterrorism: What? Why? and Who?
Campbell J.
Department of Medical Technology, Wichita State University, 1845 Fairmount, Wichita KS 67260, USA. campbell@chp.twsu.edu
The former Secretary of the Department of Health and Human Services, Donna Shalala, indicated in an address in 1999 that complacency needs to be replaced with a sense of urgency in order for us to deal successfully with the threats of bioterrorism. The attack on September 11, 2001 and the anthrax threats have made our vulnerability clear. We are now living in a new and frightening world. Our complacency is gone. The victims and the survivors shall remain forever in our minds. Dr. Jeffery Koplan, Director, Centers for Disease Control and Prevention in his broadcast, Building Infrastruture to Protect the Public Health said we must look at preparedness in a new way. We need to: build a solid public health infrastructure with grant monies; rapidly address the problem of inadequately trained staff; and address the capacity of a laboratory to produce timely and accurate results for the diagnosis of agents in the investigation of outbreaks. We must take action to prepare the healthcare system to rapidly meet any challenge, overt or covert, that may emerge.
PMID: 12778948 [PubMed - indexed for MEDLINE]

16: Clin Lab Sci. 2002 Summer;15(3):183-6.
Anthrax 2001--lessons learned by public health laboratories.
Heatherley SS.
Corpus Christi-Nueces County Public Health Department and Quality Laboratory Consultants, TX 78411, USA. sandrah@ci.corpus-christi.tx.us

OBJECTIVE: To share lessons learned by one local public health department during the anthrax outbreak and associated public hysteria during the autumn of 2001. DATA SOURCES: Current literature and personal experience. CONCLUSIONS: Previous planning for a possible bioterrorism event is essential. Management of the communication and testing process is essential for the protection of the public.
PMID: 12778966 [PubMed - indexed for MEDLINE]

17: Clin Lab Sci. 2002 Summer;15(3):180-2.
Anthrax 2001--lessons learned: clinical laboratory and beyond.
Luper DC.
Microbiology Department, CHRISTUS Spohn Health System, Corpus Christi, TX 78405,
USA. dyan_luper2@iwhs.org
OBJECTIVE: Re-visit the 2001 anthrax outbreak to assess the ideas and concepts learned from the event as they relate to the illness and to bioterrorism preparedness. DATA SOURCES: Current literature. CONCLUSION: A multitude of lessons have been brought to light. The future of bioterrorism preparedness depends on whether those lessons are acknowledged and acted upon.
PMID: 12778965 [PubMed - indexed for MEDLINE]

18: Clin Lab Sci. 2002 Summer;15(3):177-9.
The Laboratory Response Network for bioterrorism.
Heatherley SS.
Corpus Christi-Nueces County Public Health Department Laboratory and Quality Laboratory Consultants, TX 78411, USA. sandrah@ci.corpus-christi.tx.us
OBJECTIVE: To describe the function and levels of analysis performed by members of the Laboratory Response Network in coping with biological agents of terrorism. DATA SOURCES: Current literature and the Internet. CONCLUSIONS: The Laboratory Response Network is designed to enable rapid, safe, and accurate diagnosis of disease in order to mobilize the nation's response to acts of bioterrorism.
PMID: 12778964 [PubMed - indexed for MEDLINE]

19: Comp Immunol Microbiol Infect Dis. 2003 Oct;26(5-6):401-21.
Medical management of biological warfare and bioterrorism: place of the immunoprevention and the immunotherapy.
Binder P, Attre O, Boutin JP, Cavallo JD, Debord T, Jouan A, Vidal D.
Direction centrale du service de sante des Armees, BP 125, 00459, Armees, France
Biological weapons are considered as mass destruction and terror weapons. Terrorism including bioterrorism is the major threat in the future conflicts for our nations. The aim of bioterrorism is more related to the potential disorganisation of the society than to the lethal effects of the agents used. The dramatic consequences cannot be discarded, especially if contagious agents such viral are used. The preparation of specific defence measures is a major challenge for our countries.The knowledge acquired from the struggle against natural infectious diseases and recent events are essential to improve
behaviours to face the biological weapon threats. The defence attitude is based on the anticipation of the threat, the management of the victims, and the restoration of the operational capabilities. This global defence attitude implies six important functions: (i) alert, (ii) detection and diagnosis, (iii) availability of pharmaceutical

countermeasures such as vaccine, sera and anti-infectious medicine and products, (iv) medical management of victims, (v) training and information, (vi) research and development.Passive and active immunoprevention and immuntherapy belong to the approaches discussed in the context of bioterrorism countermeasures. Further researches might be focused on these topics.
PMID: 12818625 [PubMed - in process]

20: Comp Immunol Microbiol Infect Dis. 2003 Oct;26(5-6):423-30.
Smallpox vaccination and bioterrorism with pox viruses.
Mayr A.
Institute of Microbiology, Infectious and Epidemic Diseases of the Veterinary, Faculty of the Ludwig-Maximilian, University of Munich, Weiheimer Strasse 1, 823 19, Starnberg, Germany
Bioterrorist attacks occupy a special place amongst the innumerable potential types of terrorist attack, with the intentional release of pox viruses being especially feared in this connection. Apart from the variola virus, the agent responsible for smallpox in humans, the monkeypox virus and numerous other animal pox viruses pose potential risks for humans and animals. This risk scenario also includes recombinations between the various pox viruses, changes in hosts and genetically engineered manipulations of pox viruses.For over 200 years, the method of choice for combatting smallpox was via vaccination with a reproductive, original vaccinia virus. Worldwide eradication of smallpox at the end of the 1970s and the discontinuation of routine smallpox vaccination in 1980 can be credited to such vaccination. Unfortunately, these vaccinations were
associated with a large number of postvaccinal impairments, sometimes resulting in death (e.g. postvaccinal encephalitis). The only way to restrict such postvaccinal complications was to carry out initial vaccination within the first 2 postnatal years. Initial vaccination at a later age led to such a sharp increase in the number of vaccines with complications that vaccination had to be discouraged.The dilemma of the smallpox vaccine stocks stems from the fact that a large portion of these stocks are produced with the same vaccinia strains as before. This is irresponsible, especially as the percentage of immune-suppressed persons in the population, for whom vaccination-related complications pose an especial threat, is increasing.One solution to the dilemma of the smallpox vaccine stocks is the MVA strain. It is harmless, protects humans and animals equally well against smallpox and can be applied parenterally.
PMID: 12818626 [PubMed - in process]

21: Comp Immunol Microbiol Infect Dis. 2003 Oct;26(5-6):431-43.
Bioterrorism and infectious animal diseases.
Blancou J, Pearson JE.
Directeur general honoraire de l'Office international des epizooties, 11 rue Descombes, 75 017, Paris, France
After a brief historical introduction, the authors describe a list of pathogens likely to be used by bioterrorists to adversely affect animal health and production, and eventually human health in case of zoonotic agents. The selection criteria for these numerous pathogens as well as the means available for their procurement, manipulation and dispersal are discussed. The potential consequences of this bioterrorism are evaluated mainly in economic terms. The authors conclude that the

threat of bioterrorism is serious and suggest appropriate measures to prevent it or to limit its consequences.
PMID: 12818627 [PubMed - in process]

22: Crit Care Nurs Clin North Am. 2003 Jun;15(2):257-64.
The Army chemical/biological SMART (SMART-CB) team: the nurse's role.
Barajas K, Stewart WA, Combs EW.
Walter Reed Army Medical Center, Walter Reed Station, Washington, DC 20012, USA.
A chemical or biologic attack probably will be covert, rather than overt. Because presenting signs and symptoms may mimic minor nonspecific illnesses or naturally produced disease syndromes and may not appear for several days, it is likely that nurses in emergency rooms and primary care settings will be among the first to come into contact with victims of a chemical or biologic agent exposure. Early recognition, reporting, decontamination, self-protection, prophylaxis, and treatment are imperative. After the terrorist attack on September 11, 2001, the anthrax incidents, and the heightened publicity of chemical and biologic agent attacks brought on by media coverage, the need for highly trained and well-prepared medical personnel has increased dramatically. Army nurses have led the way in training and expanding the capabilities of specialized medical response teams. Team members require ongoing training, state-of-the-art protective equipment and medical supplies, and constant
practice to maintain the high state of readiness required to respond rapidly and effectively to chemical or biologic threats. Army SMART-CB nurses and their team members are well prepared to provide lifesaving care in highly contaminated areas. It is no longer a question of if but rather when and where the next attack will occur.
Publication Types: Review Review, Tutorial
PMID: 12755191 [PubMed - indexed for MEDLINE]

23: Crit Care Nurs Clin North Am. 2003 Jun;15(2):245-55.
Patient care in a biological safety level-4 (BSL-4) environment.
Marklund LA.
Operational Medicine Division, US Army Medical Research Institute of Infectious Diseases, Fort Detrick, MD 21702, USA. leroy.marklund@campbell.army.mil
The greatest threats to America's public health include accidental importation of deadly diseases by international travelers and the release of biologic weapons by our adversaries. The greatest failure is unpreparedness because international travel and dispersion of biologic agents by our enemies are inevitable. An effective medical defense program is the recommended deterrent against these threats. The United States has a federal response plan in place that includes patient care and patient transport by using the highest level of biologic containment: BSL-4. The DoD has the capability to provide intensive care for victims infected with highly infectious yet unknown biologic agents in an environment that protects the caregiver while allowing scientists to study the characteristics of these new agents and assess the effectiveness of
treatment. Army critical care nurses are vital in the biologic medical defense against unidentified infectious diseases, accidental occupational exposures, or intentional dispersion of weaponized biologic agents. Research that carefully advances healthcare using BSL-4 technology addresses the challenges of the human element of BSL-4 containment patient care, and BSL-4 patient transport enhances our nation's ability to address the emerging biologic threats we confront in the future.

Publication Types: Review Review, Tutorial
PMID: 12755190 [PubMed - indexed for MEDLINE]

24: Croat Med J. 2003 Jun;44(3):336-41.
Laboratory Aspects of Bioterrorism-related Anthrax - from Identification to Molecular Subtyping to Microbial Forensics.
Popovic T, Glass M.
Tanja Popovic, Epidemiologic Investigations Laboratory, Meningitis and Special Pathogens Branch, DBMD/NCID/CDC, Mailstop G34, 1600 Clifton Road, Atlanta, GA 30333, USA, txp1@cdc.gov

During the bioterrorism-associated anthrax investigation of 2001 in the United States, 11 patients were diagnosed with inhalational anthrax and 11 more with the cutaneous forms of the disease. Over 125,000 specimens were processed at laboratories of the Laboratory Response Network including those at the Centers for Disease Control and Prevention. Although the 2001 anthrax investigation initially began as a public health investigation, the forensic aspect quickly became a preeminent component of the investigation. Whereas a public health investigation aims primarily to identify the causative agent and its source, so that appropriate and timely control and preventative measures can be implemented, a forensic investigation goes further to associate the source of the causative agent with a specific individual or group. In addition to
identification and molecular characterization of the causative agents, which are the crucial components of forensic microbiology, there are many other requirements and activities that need to be in place for investigators to successfully complete a forensic investigation. These activities include establishment of quality assurance/quality control criteria and regular proficiency testing for all laboratories where evidence is analyzed; additional and/or specialized training in handling and processing samples in accordance
with forensic microbiology criteria, not only for first responders but also for laboratory and other public health scientists; and establishing and maintaining repositories and databases containing isolates of diverse temporal and geographic origins to provide a comparative and diverse background for investigators to identify and track the origin and source of such agents.
PMID: 12808729 [PubMed - in process]

25: Ear Nose Throat J. 2003 Apr;82(4):263-5.
Tularemia of the head and neck: a possible sign of bioterrorism.
Stupak HD, Scheuller MC, Schindler DN, Ellison DE.
Department of Otolaryngology-Head and Neck Surgery, University of California, 400 Parnassus Ave., Suite A717, San Francisco, CA 94143, USA.
hstupak@itsa.ucsf.edu
Recent bioterror attacks and other world events have focused the medical community's attention on agents that might be used in biological warfare. One of these potential biological weapons is Francisella tularensis, a gramnegative coccobacillus that is one of the most infectious bacteria known. F tularensis can cause severe, even fatal, systemic tularemia. Under normal circumstances, F tularensis is transmitted by infected ticks, insects, and other animals. As a weapon of terrorism, the bacterium would likely be disseminated as an aerosol and contracted by inhalation. Because many cases of tularemia are characterized by head and neck symptoms, otolaryngologists should be familiar with the diagnosis and management

of this disease. In this article, we describe a case of zoonotic tularemia that manifested as a neck mass, and we review the pathophysiology, diagnosis, and treatment of tularemia. We also summarize what is known about its potential as a biological weapon.
PMID: 12735158 [PubMed - indexed for MEDLINE]

26: Emerg Infect Dis. 2003 May;9(5):515-9.
Planning against biological terrorism: lessons from outbreak investigations.
Ashford DA, Kaiser RM, Bales ME, Shutt K, Patrawalla A, McShan A, Tappero JW, Perkins BA, Dannenberg AL.
Centers for Disease Control and Prevention, 1600 Clifton Road, Mailstop C09, Atlanta, GA 30333, USA. dba4@cdc.gov

We examined outbreak investigations conducted around the world from 1988 to 1999 by the Centers for Disease Control and Prevention's Epidemic Intelligence Service. In 44 (4.0%) of 1,099 investigations, identified causative agents had bioterrorism potential. In six investigations, intentional use of infectious agents was considered. Healthcare providers reported 270 (24.6%) outbreaks and infection control practitioners reported 129 (11.7%); together they reported 399 (36.3%) of the outbreaks. Health departments reported 335 (30.5%) outbreaks. For six outbreaks in which bioterrorism or intentional contamination was possible, reporting was delayed for up to 26 days. We confirmed that the most critical component for bioterrorism outbreak detection and reporting is the frontline healthcare profession and the local health departments. Bioterrorism preparedness should emphasize education and support of this frontline as well as methods to shorten the time between outbreak and reporting.
Publication Types: Meta-Analysis
PMID: 12737732 [PubMed - indexed for MEDLINE]

27: Emerg Infect Dis. 2003 May;9(5):556-64.
Endemic, notifiable bioterrorism-related diseases, United States, 1992-1999.
Chang MH, Glynn MK, Groseclose SL.
Centers for Disease Control and Prevention, 1600 Clifton Road NE, Mailstop K74, Atlanta, GA 30333, USA. mdc9@cdc.gov
Little information is available in the United States regarding the incidence and distribution of diseases caused by critical microbiologic agents with the potential for use in acts of terrorism. We describe disease-specific, demographic, geographic, and seasonal distribution of selected bioterrorism-related conditions (anthrax, botulism, brucellosis, cholera, plague, tularemia, and viral encephalitides) reported to the National Notifiable Diseases Surveillance System in 1992 to 1999. Tularemia and brucellosis were the most frequently reported diseases. Anthrax, plague, western equine encephalitis, and eastern equine encephalitis were rare. Higher incidence rates for cholera and plague were noted in the western United States and for tularemia in the
central United States. Overall, the incidence of conditions caused by these critical agents in the United States is low. Individual case reports should be considered sentinel events. For potential bioterrorism-related conditions that are endemic and have low incidence, the use of nontraditional surveillance methods and complementary data sources may enhance our ability to rapidly detect changes in disease incidence.
PMID: 12737739 [PubMed - indexed for MEDLINE]

28: Home Healthc Nurse. 2003 Apr;21(4):220-3.
Bioterrorism: are we prepared?
Sawyer PP.
Visiting Nurse Associations of America, Boston, MA 02110, USA.
Bioterrorism information including the role for professional health providers is increasing daily. Because this subject creates a variety of personal feelings and is very new information, many nurses ignore opportunities to educate themselves thinking, "It will never happen to me."Every American, especially healthcare personnel, must be knowledgeable and up-to-date about prevention and intervention strategies as well as their responsibilities. This article outlines the current concerns, approaches, and roles of home care nurses in bioterrorism.
PMID: 12695693 [PubMed - indexed for MEDLINE]
29: Infect Genet Evol. 2002 May;1(3):179-81.
The European Centre for Infectious Diseases: an adequate response to the challenges of bioterrorism and major natural infectious threats.
Tibayrenc M, Mas-Coma S, Piffaretti JC, Struelens M.
Publication Types: Editorial
PMID: 12798013 [PubMed - in process]

30: J Am Dent Assoc. 2003 Mar;134(3):278, 280.
Comment on:
J Am Dent Assoc. 2002 Dec;133(12):1600, 1602, 1604.
Bioterrorism response.
Alfano MC.
Publication Types: Comment Letter
PMID: 12699041 [PubMed - indexed for MEDLINE]

31: J Am Dent Assoc. 2002 Dec;133(12):1600, 1602, 1604.
Comment in:
J Am Dent Assoc. 2003 Mar;134(3):278, 280.
Are we ready? Thinking about the unthinkable.
Jeffcoat MK.
Publication Types: Editorial
PMID: 12512653 [PubMed - indexed for MEDLINE]

32: J Am Diet Assoc. 2003 Jun;103(6):687-91.
Food biosecurity.
Bruemmer B.
Department of Epidemiology, Nutritional Sciences Program, University of Washington, Box 353410, 305M Raitt Hall, Seattle, WA 98195, USA.
PMID: 12778038 [PubMed - indexed for MEDLINE]

33: J Am Vet Med Assoc. 2003 Mar 15;222(6):714.
Comment on:
J Am Vet Med Assoc. 2002 Oct 1;221(7):951-7.
Health care professionals should properly play their part in fulfilling societal roles.
Auslander M, Hunter L, Currier RW, Ettestad P, Howell JE, Johnston B.

Publication Types: Comment Letter
PMID: 12675290 [PubMed - indexed for MEDLINE]

34: J Dermatolog Treat. 2003 Jan;14(1):46-7.
Topical nitrogen mustard ointment with occlusion for Langerhans' cell histiocytosis of the scalp.
Treat JR, Suchin KR, James WD.
Department of Dermatology, University of Pennsylvania School of Medicine, Philadelphia, PA 19104, USA.
BACKGROUND: Topical nitrogen mustard solution has been used as an effective alternative to corticosteroids for the treatment of cutaneous eruptions of Langerhans' cell histiocytosis (LCH). When used as an ointment under occlusion, nitrogen mustard may still be effective and possess less risk of unwanted side effects. METHODS: A patient with scalp LCH was treated topically with nitrogen mustard ointment 0.01% under occlusion. RESULTS: The lesions cleared in 3 weeks without irritation. CONCLUSION: Topical nitrogen mustard ointment 0.01% under occlusion is a well-tolerated, non-irritating treatment for scalp LCH.
PMID: 12745855 [PubMed - indexed for MEDLINE]

35: J Emerg Med Serv JEMS. 2003 Apr;28(4):12.
The need to address new threats.
Heightman AJ.
PMID: 12736601 [PubMed - indexed for MEDLINE]

36: J Emerg Med Serv JEMS. 2003 Apr;28(4):84, 86.
Amazing terrorism tool: new foam could revolutionize decon.
Lindsey J.
Estero (Fla.) Fire Rescue, USA. jtlindsey1@aol.com
PMID: 12736611 [PubMed - indexed for MEDLINE]

37: J Environ Health. 2003 Apr;65(8):51-2.
Molecular machine could develop drugs for bioweapons victims.
[No authors listed]
PMID: 12690825 [PubMed - indexed for MEDLINE]

38: J Environ Health. 2003 Apr;65(8):31.
Tularemia.
[No authors listed]
PMID: 12690822 [PubMed - indexed for MEDLINE]

39: J Environ Health. 2003 Mar;65(7):40.
Better plan needed to protect U.S. agriculture from bioterrorism.
[No authors listed]
PMID: 12645424 [PubMed - indexed for MEDLINE]

40: J Food Prot. 2003 Apr;66(4):691-9.
Bacillus anthracis: current knowledge in relation to contamination of food.
Erickson MC, Kornacki JL.
Center for Food Safety, Department of Food Science and Technology, University of Georgia, 1109 Experiment Street, Griffin, Georgia 30223, USA.
In this article, information related to anthrax and its etiologic agent, Bacillus anthracis, in food is reviewed. The major topics discussed include the taxonomic relationship of B. anthracis to other Bacillus species, methods used for the recovery of the organism from surfaces and foods, routes of infection, the pathogenesis of the organism, the microbial ecology of the vegetative cell and spore in foods and the environment, chemical and physical treatments for spore inactivation, and the control of the disease in animals.
Publication Types: Review Review, Tutorial
PMID: 12696699 [PubMed - indexed for MEDLINE]

41: J Immunol. 2003 Mar 15;170(6):2793.
Benefit versus risk.
Rich RR.
Publication Types: Editorial
PMID: 12626525 [PubMed - indexed for MEDLINE]

42: J Occup Environ Med. 2003 Mar;45(3):219.
Vaccination records in Gulf War veterans.
Greenberg N, Iversen A, Hull L, Unwin C, Destrange M, Wessely S.
Publication Types: Letter
PMID: 12661177 [PubMed - indexed for MEDLINE]

43: J Okla State Med Assoc. 2003 May;96(5):214-7.
Other bacterial diseases as a potential consequence of bioterrorism: Q fever, brucellosis, glanders, and melioidosis.
Voskuhl GW, Cornea P, Bronze MS, Greenfield RA.
Department of Medicine, Section of Infectious Diseases, University of Oklahoma Health Sciences Center, Department of Veterans Affairs Medical Center, Oklahoma City.
PMID: 12833721 [PubMed - in process]

44: J Urban Health. 2003 Jun;80 Suppl 1:I25-I31.
Syndromic surveillance using minimum transfer of identifiable data: the example of the national bioterrorism syndromic surveillance demonstration program.
Platt R, Bocchino C, Caldwell B, Harmon R, Kleinman K, Lazarus R, Nelson AF, Nordin JD, Ritzwoller DP.
Drs. Platt and Kleinman are with the Department of Ambulatory Care and Prevention, Harvard Medical School and Harvard Pilgrim Health Care, Boston, Massachusetts.
Several health plans and other organizations are collaborating with the Centers for Disease Control and Prevention to develop a syndromic surveillance system with national coverage that includes more than 20 million people. A principal design feature of this system is reliance on daily reporting of counts of individuals with syndromes of interest in specified geographic regions rather than reporting of individual encounter-level information. On request from public health agencies,

health plans and telephone triage services provide additional information regarding individuals who are part of apparent clusters of illness. This reporting framework has several advantages, including less sharing of protected health information, less risk that confidential information will be
distributed inappropriately, the prospect of better public acceptance, greater acceptance by health plans, and less effort and cost for both health plans and public health agencies. If successful, this system will allow any organization with appropriate data to contribute vital information to public health syndromic surveillance systems while preserving individuals' privacy to the greatest extent possible.
PMID: 12791776 [PubMed - in process]

45: J Urban Health. 2003 Jun 1;80 Supplement 1:I89-I96.
The Bioterrorism Preparedness and Response Early Aberration Reporting System (EARS).
Hutwagner L, Thompson W, Seeman GM, Treadwell T.
Ms. Hutwagner, Mr. Seeman, and Dr. Treadwell are with the National Centers for Infectious Diseases, Bioterrorism Preparedness and Response, and Dr. Thompson is with the National Immunization Program, Immunization Safety Branch, Centers for Disease Control and Prevention, Atlanta, Georgia.
Data from public health surveillance systems can provide meaningful measures of population risks for disease, disability, and death. Analysis and evaluation of these surveillance data help public health practitioners react to important health events in a timely manner both locally and nationally. Aberration detection methods allow the rapid assessment of changes in frequencies and rates of different health outcomes and the characterization of unusual trends or clusters. The Early Aberration Reporting System (EARS) of the Centers for Disease Control and Prevention allows the analysis of public health surveillance data using available aberration detection methods. The primary purpose of EARS is to provide national, state, and local health departments with several alternative aberration detection methods. EARS helps assist local and state health officials to focus limited resources on appropriate activities during epidemiological investigations of important public health events. Finally, EARS allows end users to select validated aberration detection methods and modify sensitivity and specificity thresholds to values considered to be of public health importance by local and state health departments.
PMID: 12791783 [PubMed - as supplied by publisher]

46: Lancet Infect Dis. 2003 Jun;3(6):318.
Decontamination spray could save lives after bioterrorist attack.
Larkin M.
Publication Types: News
PMID: 12781487 [PubMed - indexed for MEDLINE]

47: Med J Aust. 2003 Feb 3;178(3):141; author reply 141.
Comment on: Med J Aust. 2002 Aug 19;177(4):196-9.
Chemical-biological-radiological (CBR) response: a template for hospital emergency departments.
Nocera A.
Publication Types: Comment Letter
PMID: 12776733 [PubMed - indexed for MEDLINE]

48: Med J Aust. 2003 Feb 3;178(3):140-1; author reply 141.
Comment on: Med J Aust. 2002 Aug 19;177(4):196-9.
Chemical-biological-radiological (CBR) response: a template for hospital emergency departments.
Bradt DA.
Publication Types: Comment Letter
PMID: 12558489 [PubMed - indexed for MEDLINE]

49: Mil Med. 2003 May;168(5):351-4.
Operation Castle Cascade: managing multiple casualties from a simulated chemical weapons attack.
Siegel D, Younggren BN, Ness B, Kvool V.
Department of Emergency Medicine, Madigan Army Medical Center, Tacoma, WA 98431,USA.
In the wake of the recent terrorist attack on the United States, there is an ever-increasing need for the defense against weapons of mass destruction. The use of explosive devices in combination with chemical agents could result in a community disaster with multiple traumatic and medical injuries. Military medical personnel may be the first called upon due to their unique training and equipment. Operation Castle Cascade was a large-scale exercise on a military instillation involving the apprehension of hostages and detonation of an explosive device containing dimethyl sulfate. We will provide details on the medical management of 50 patients with simulated chemical and traumatic injuries. Issues relating to on-site chemical identification, triage, decontamination, treatment, casualty collection, and transportation of casualties are addressed in this article.
PMID: 12775167 [PubMed - indexed for MEDLINE]

50: Mod Healthc. 2003 May 19;33(20):22.
Doing the drill. Hospital staffs get inventive during bioterror drills.
Taylor M.
Publication Types: News
PMID: 12800583 [PubMed - indexed for MEDLINE]

51: Nature. 2003 Jun 5;423(6940):571.
Biodefence takes its toll.
[No authors listed]
Publication Types: Editorial
PMID: 12789296 [PubMed - indexed for MEDLINE]

52: Perform Improv Advis. 2003 Apr;7(4):58-61, 49.
Smallpox clinical pathway prepares Stanford for possible attack.
[No authors listed]
PMID: 12762182 [PubMed - indexed for MEDLINE]

53: Proc Natl Acad Sci U S A. 2003 Apr 15;100(8):4355-6. Epub 2003 Apr 07.

Comment on:
Proc Natl Acad Sci U S A. 2003 Apr 1;100(7):4346-51.
A silent bomb: the risk of anthrax as a weapon of mass destruction.
Webb GF.
Department of Mathematics, Vanderbilt University, Nashville, TN 37235, USA. glenn.f.webb@vanderbilt.edu
Publication Types: Comment
PMID: 12682291 [PubMed - indexed for MEDLINE]

54: Public Health Rep. 2003 May-Jun;118(3):205-14.
Chemical weapon functional exercise--Cincinnati: observations and lessons learned from a "typical medium-sized" city's response to simulated terrorism utilizing Weapons of Mass Destruction.
FitzGerald DJ, Sztajnkrycer MD, Crocco TJ.
Department of Emergency Medicine, University Hospital, Cincinnati, OH 45267-0769, USA. denis.fitzgerald@uc.edu
In the wake of the September 11, 2001, attacks and the subsequent anthrax scare, there is growing concern about the United States' vulnerability to terrorist use of Weapons of Mass Destruction (WMD). As part of ongoing preparation for this terrible reality, many jurisdictions have been conducting simulated terrorist incidents to provide training for the public safety community, hospitals, and public health departments. As an example of this national effort to improve domestic preparedness for such events, a large scale, multi-jurisdictional chemical weapons drill was conducted in Cincinnati, Ohio, on May 20, 2000. This drill depicted the components of the early warning system for hospitals and public health departments, the prehospital medical response to terrorism. Over the course of the exercise, emergency medical services personnel decontaminated, triaged, treated, and transported eighty-five patients. Several important lessons were learned that day that have widespread applicability to health care delivery systems nationwide, especially in the areas of decontamination, triage, on-scene medical care, and victim transportation. As this training exercise helped Cincinnati to prepare for dealing with future large scale WMD incidents, such drills are invaluable preparation for all communities in a world increasingly at risk from terrorist attacks.
PMID: 12766215 [PubMed - indexed for MEDLINE]

55: Science. 2003 Jun 6;300(5625):1503-4; author reply 1503-4.
Comment on: Science. 2002 Nov 15;298(5597):1428-32.
Smallpox bioterror response.
Kaplan EH, Wein LM.
Publication Types: Comment Letter
PMID: 12791963 [PubMed - indexed for MEDLINE]